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CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/BM/CSR-03/778h/CEMENT/2014-15 Date: 05.03.2015

TEST REPORT ON CEMENT

* CUSTOMER	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
*AGENCY	:	**Mr. B. Muniraju** No. 20, 1st Main, 1st Cross, Havanoor Extension, Bangalore – 560 073.
*NAME OF THE WORK	:	Improvements to footpath 17th A & 17th B Cross Roads Opp. Geetha School in Ward No. 13 in Shettyhalli Sub Division, BBMP, Bangalore.
REFERENCE	:	BBMP/AEE/SSD/DZ/PR/198/2014-15 Dated: 02.03.2015
SAMPLE ID	:	Cement
SAMPLE RECEIVED ON	:	02.03.2015
PERIOD OF TESTING	:	02.03.2015 to 05.03.2015

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988(RA-2009)	28.00 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988(RA-2009)	145 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988(RA-2009)	460 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988(RA-2009)	1 mm	Not more than 10mm

*Information is furnished by the Customer/Representative.

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****

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CIVIL-TECH CONSULTANTS AND ENGINEERS

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T-2377

Job No.: CTCE/BBMP/BM/CSR-03/778h/SAND-Gradation/2014-15 : 05.03.2015

TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. B. Muniraju**
No. 20, 1st Main, 1st Cross, Havanoor Extension, Bangalore – 560 073.

*** Name of Work** : Improvements to footpath 17th A & 17th B Cross Roads Opp. Geetha School in Ward No. 13 in Shettyhalli Sub Division, BBMP, Bangalore.

Reference : BBMP/AEE/SSD/DZ/PR/198/2014-15 Dated: 02.03.2015

Technical Reference : IS : 2386 Part 1 - 1963 RA-2007

Sample ID : Fine Aggregates

Sample Received on : 02.03.2015

Date of Testing : 05.03.2015

Total Wt. of Aggregates in gms **1000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Spec.Limits as per IS 383-1970 (RA- 2007)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	94.14	90-100	90-100	90-100	95-100
2.36	77.60	60-95	75-100	85-100	95-100
1.18	57.17	30-70	55-90	75-100	90-100
600 Micron	39.12	15-34	35-59	60-79	80-100
300 Micron	12.95	5-20	8-30	12-40	15-50
150 Micron	3.80	0-10	0-10	0-10	0-15

* Information is furnished by the Customer/Representative

Remarks : This sample is under Zone-II specific limits.

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T-2377

Job No.: CTCE/BBMP/BM/CSR-03/778h/AGG/GR/2014-15 : 05.03.2015

TEST REPORT ON COARSE AGGREGATES

* Customer	: **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
* Agency	: **Mr. B. Muniraju** No. 20, 1st Main, 1st Cross, Havanoor Extension, Bangalore – 560 073.
* Name of Work	: Improvements to footpath 17th A & 17th B Cross Roads Opp. Geetha School in Ward No. 13 in Shettyhalli Sub Division, BBMP, Bangalore.
Reference	: BBMP/AEE/SSD/DZ/PR/198/2014-15 Dated: 02.03.2015
Technical Reference	: IS : 2386 Part 1 -1963 RA-2007
Sample ID	: Coarse Aggregates (40mm)
Sample Received on	: 02.03.2015
Date of Testing	: 05.03.2015

Total Wt. of Aggregates in gms= **10000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Spec.Limits as per IS 383-1970 (RA- 2007)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	96.84	95-100	85-100
20	48.31	30-70	0-20
10	13.04	10-35	0-5
4.75	2.26	0-5	-

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* Information is furnished by the Customer/Representative

Remarks : This sample is under Graded specific limits.

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VISHWANATH .C
Quality Manager

Nayakaslam AC

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ಬಿ.ಬಿ. ರಸ್ತೆ, ರವೀಂದ್ರನಗರ, ಬೆಂಗಳೂರು.

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T-2377

Job No.: CTCE/BBMP/BM/CSR-03/778h/CC Solid Block/2014-15 : 09.03.2015

TEST REPORT ON CEMENT CONCRETE SOLID BLOCKS

* Customer	: **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
* Agency	: **Mr. B. Muniraju** No. 20, 1st Main, 1st Cross, Havanoor Extension, Bangalore – 560 073.
* Name of the Work	: Improvements to footpath 17th A & 17th B Cross Roads Opp. Geetha School in Ward No. 13 in Shettyhalli Sub Division, BBMP, Bangalore.
Reference	: BBMP/AEE/SSD/DZ/PR/198/2014-15 Dated: 02.03.2015
Sample Received on	: 05.03.2015
Date of Testing	: 09.03.2015
Size of Blocks	: 400mm x 200mm x 200mm
Cross Sectional Area	: 80000 mm^2
Technical Reference	: IS: 2185 (Part 1) - 2005
No. of Blocks Tested	: 08

Sl.No.	Block ID	Wt. in Kg	Failure load (KN)	Compressive strength (N/mm^2)	Requirement as per IS 2185 (Part 1) - 2005
1	Block 1	25.21	262.5	3.28	Minimum required Compressive Strength of Individual Units 3.20 N/mm^2
2	Block 2	26.53	264.8	3.31	
3	Block 3	24.81	265.3	3.32	
4	Block 4	25.96	263.7	3.30	
5	Block 5	24.57	262.8	3.29	
6	Block 6	26.43	260.9	3.26	
7	Block 7	25.59	263.2	3.29	
8	Block 8	26.78	264.9	3.31	

*Information is furnished by the Customer/Representative.

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Job No.: CTCE/BBMP/BM/CSR-03/778h/CC Solid Block/2014-15 : 09.03.2015

TEST REPORT ON CEMENT CONCRETE SOLID BLOCKS

* Customer	: **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
* Agency	: **Mr. B. Muniraju** No. 20, 1st Main, 1st Cross, Havanoor Extension, Bangalore – 560 073.
* Name of the Work	: Improvements to footpath 17th A & 17th B Cross Roads Opp. Geetha School in Ward No. 13 in Shettyhalli Sub Division, BBMP, Bangalore.
Reference	: BBMP/AEE/SSD/DZ/PR/198/2014-15 Dated: 02.03.2015
Sample Received on	: 05.03.2015
Date of Testing	: 09.03.2015
Size of Blocks	: 400mm x 150mm x 200mm
Cross Sectional Area	: 60000 mm^2
Technical Reference	: IS: 2185 (Part 1) - 2005
No. of Blocks Tested	: 08

Sl.No.	Block ID	Wt. in Kg	Failure load (KN)	Compressive strength (N/mm^2)	Requirement as per IS 2185 (Part 1) - 2005
1	Block 1	24.91	195.6	3.26	Minimum required Compressive Strength of Individual Units 3.20 N/mm^2
2	Block 2	25.23	194.3	3.24	
3	Block 3	26.32	196.7	3.28	
4	Block 4	25.84	195.2	3.25	
5	Block 5	26.29	196.8	3.28	
6	Block 6	24.85	197.4	3.29	
7	Block 7	23.56	195.2	3.25	
8	Block 8	26.43	196.8	3.28	

*Information is furnished by the Customer/Representative.

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Job No.: CTCE/BBMP/BM/CSR-03/778h/CUBE/2014-15 22.04.2015

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

* Customer	: **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
* Agency	: **Mr. B. Muniraju** No. 20, 1st Main, 1st Cross, Havanoor Extension, Bangalore – 560 073.
* Name of the work	: Improvements to footpath 17th A & 17th B Cross Roads Opp. Geetha School in Ward No. 13 in Shettyhalli Sub Division, BBMP, Bangalore.
Reference	: BBMP/AEE/SSD/DZ/PR/198/2014-15 Dated: 02.03.2015
* Sample ID	: Cement Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
* Grade of Concrete	: M_{15}
Compressive Strength as on	: 28^{th} day
Sample Received on	: 25.03.2015

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	25.03.2015	22.04.2015	8.149	362.8	16.12
2	25.03.2015	22.04.2015	8.235	374.6	16.65
3	25.03.2015	22.04.2015	8.362	389.5	17.31

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Job No.: CTCE/BBMP/BM/CSR-03/778h/Precast Slab/2014-15

23.03.2015

TEST REPORT ON CONCRETE CORE (PRECAST SLAB)

* Customer	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
* Agency	:	**Mr. B. Muniraju** No. 20, 1st Main, 1st Cross, Havanoor Extension,
* Name of work	:	Improvements to footpath 17th A & 17th B Cross Roads Opp. Geetha School in Ward No. 13 in Shettyhalli Sub Division, BBMP, Bangalore.
Reference	:	BBMP/AEE/SSD/DZ/PR/198/2014-15 Dated: 02.03.2015
Techinical Reference	:	IS:516-1959 (Reaffirmed 2008), SP-24:1983.
Sample ID	:	Precast Slab
Sample Received on	:	02.03.2015
Date of Testing	:	23.03.2015

Sl. No.	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m^3)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm^2)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm^2)	Equivalent Cube Compressive Strength (N/mm^2)
1	50.00	80.00	0.395	2514.65	1.60	0.960	31.9	16.22	17.52	16.82	21.02
2	50.00	81.00	0.402	2527.62	1.62	0.965	32.3	16.42	17.74	17.12	21.40
3	50.00	82.00	0.406	2521.64	1.64	0.970	33.5	17.06	18.43	17.87	22.34

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